

REMARKS

Claims 1-19 are now pending in the present application. Claims 12-19 have been added. Support for claims 12-17 may be found at least in the originally filed claims. Support for claims 18-19 may be found at least on page 8, lines 11-25. No new matter was added and the addition of these claims does not violate 37 C.F.R. § 1.145.

In the final Office Action, the specification was objected to and claims 1-11 were rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants respectfully traverse this rejection.

The specification was objected to and the claims rejected due to the use of the term "oxygen/carbon ratio." According to the Office Action, the specification fails to disclose what the ratio is of and one of ordinary skill in the art would not be able to determine whether the ratio is a weight, volume, atomic or molar ratio without undue experimentation. The Advisory Action asserts that since the specification does not state that the ESCA analysis gives an atomic ratio and from a chemical composition a molar ratio can be obtained also, it is the examiner's position that one of ordinary skill in the art would not be able to determine the O/C ratio. Applicants disagree.

One of ordinary skill would know that the oxygen/carbon ratio is an atomic ratio since the ratio is the result of the performance of electron spectroscopic chemical analysis, a well-known method of analysis. ESCA involves the measurement of the binding energy of emitted electrons, the results of which is given in the form of an atomic ratio. *See, Example 1-ESCA at page 12-14 and especially page 13, line 23 - page 14, line 2.* This is evident from a number of patents issued both before and after the filing date of the present application which

refer to ESCA and the derivation of atomic ratios or values. *See, for example, U.S. Patent Nos. 5,487,920 (Tables 12-13), 5,540,984 (column 19, lines 25-40), 5,627,079 (Tables), and 6,420,260 (column 6, lines 41-55), among others.* In view of the knowledge of one of skill in the art as shown by the patent art itself and the teachings of the specification, Applicants submit that the oxygen/carbon ratio of the claims would be well understood by one of skill in the art to be an atomic ratio and undue experimentation would not be required to make and use the invention. Thus, Applicants respectfully request that this rejection be withdrawn.

Claims 1, 2 and 6-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Langdon, U.S. Patent No. 5,368,910 in view of Gryskiewicz et al., U.S. Patent No. 5,913,851. The Advisory Action asserts that the oxygen/carbon ratio of a material is inherent in the material. Applicants respectfully traverse this rejection.¹

Claim 1 is directed to a liquid-permeable cover sheet for an absorbent article which cover sheet comprises at least a first material layer, wherein a surface of the first material layer essentially consists of polyethylene which has been treated with plasma or corona to obtain a hydrophilic surface. The surface of the first material layer further has an oxygen/carbon ratio which is higher than 0.19. Independent claim 8 is directed to an absorbent article comprising an absorbent body enclosed between a liquid-impermeable cover sheet and a liquid-permeable cover sheet. The liquid-permeable cover sheet comprises at least a first material layer wherein a surface of the first material layer essentially consists of polyethylene which has been treated with plasma or corona in order to obtain liquid permeability. The surface of the first material layer further has an oxygen/carbon ratio which is higher than 0.19.

¹Applicants note that while claims 3 and 4 are not specifically mentioned in the rejection, these claims are addressed in paragraph 7 of the Office Action in the discussion thereof. Thus, these claims are considered with claims 1, 2 and 6-10.

Langdon discloses a three-dimensional fluid pervious web suitable for use as a top sheet in an absorbent article. The web includes a first layer of polymeric material and a second layer of fibrous material secured to the first layer of polymeric material. The fibrous material preferably comprises synthetic fibers, such as nylon, polyethylene, polypropylene, polyester, biocomponent binder fibers or natural fibers such as cellulosic fibers. To increase the hydrophilicity of the fibrous surface, the fibers may be treated with a surfactant or the surface may be subjected to ionizing radiation, for example, plasma. However, Langdon does not disclose plasma- or corona-treated surfaces essentially consisting of polyethylene and having an oxygen/carbon ratio which is higher than 0.19.

Gryskiewicz relates to a method of making an absorbent article including liquid containment beams. Gryskiewicz describes as part of its absorbent article a support layer which may comprise a woven knit or nonwoven web. Suitable nonwoven webs include spunbonded, meltblown or bonded-carded webs composed of synthetic polymer filaments or fibers, such as polypropylene, polyethylene, polyesters or the like, among others. The support layer may be treated with a surfactant to aid in liquid transfer to the absorbent structures and may include polyethylene sheath and polyester core bicomponent staple fibers. Gryskiewicz only mentions corona treatment in describing a preferred material for the moisture barrier material which is liquid impermeable. *Column 9, lines 1-13*. This patent does not mention any particular oxygen/carbon ratios.

In order to obtain the cover sheet as claimed, one of skill in the art would have to know which portions of Langdon and Gryskiewicz to combine. However, neither of Langdon or Gryskiewicz suggests the selection of polyethylene over the other possible materials listed therein. (*See Langdon, column 2, lines 48-52, Gryskiewicz, column 9, lines 1-6*). Additionally, neither Langdon nor Gryskiewicz discloses the specific selection of plasma or corona treatment, referring also to treatments with surfactants. Finally, neither Langdon nor Gryskiewicz discloses a

material according to the claimed invention wherein a surface of a material essentially consisting of polyethylene has an oxygen/carbon ration which is higher than 0.19.

The examiner argues that the oxygen/carbon ratio would be inherent in the "material of the prior art"; however, the fact that a certain result or characteristic may occur or be present in the art is not sufficient to establish the inherency of that result or characteristic. *MPEP* § 2112; *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). The oxygen/carbon ratio of the claims would only potentially be present if one of skill in the art knew which materials to use and how to treat them. Neither Langdon nor Gryskiewicz direct one of skill in the art to the claimed material. Moreover, neither cited patent teaches the claimed combination nor suggests that such will provide the advantages discovered by Applicants.

The problem solved by the claimed invention is to be able to obtain a liquid-permeable cover sheet having a higher hydrophilicity of wettability. The present invention provides a cover sheet having good liquid permeability even after repeated wetting of the article. *Page 3, lines 32-35*. As regards corona-treated and plasma-treated materials, it has been found by Applicants that different materials show significant differences in the acquired ability to retain the liquid permeability upon repeated wetting. *Specification, page 4, lines 7-11*. In other words, it has been found that the liquid permeability upon repeated wetting is substantially better for materials with a surface of polyethylene than for materials with a surface of polypropylene. *Specification, page 4, lines 11-16*. Accordingly, the properties of polyethylene in connection with plasma or corona treatment are clearly distinguished from corona-treated films of polypropylene or other materials.

The cited patents do not recognize the properties of polyethylene in connection with plasma or corona treatment, since in those patents polyethylene is described together with, e.g., polypropylene. This means that polyethylene and,

e.g., polypropylene are described as having equal properties, and that the properties recognized by Applicants clearly have not been previously recognized. Thus, the fact is that the cited patents are silent about the properties of polyethylene and Langdon and Gryskiewicz do not reveal anything or give any hint about the advantages of the claimed invention.

As in *In re Newell*, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989), a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination. Nothing in either Langdon or Gryskiewicz teaches the selection of elements as claimed to provide the taught advantages. Thus, that such a selection may be made *based on Applicants' disclosure* to provide the oxygen/carbon ratio claimed does not make the claimed invention obvious. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Langdon in view of Gryskiewicz. Applicants respectfully traverse this rejection. As noted above, neither of the cited patents disclose the claimed invention of claim 8, from which claim 11 depends. Therefore, neither cited patent, alone or in combination, would have served to make the invention of claim 11 obvious. In view thereof, Applicants respectfully request that this rejection be withdrawn.

Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Langdon and Gryskiewicz in view of Thomas, U.S. Patent No. 4,351,784. Applicants respectfully traverse this rejection.

Thomas discloses a corona-treatment of a perforated thermoplastic film having tapered capillaries, wherein particularly preferred perforated films are polyethylene and polypropylene. In Thomas, corona-treated films of polyethylene and polypropylene are either described together or as having equal properties. In

fact, Thomas states that "Any thermoplastic material which may be formed into flexible film or sheets may be used in the production of the novel products of the present invention." *Column 3, lines 48-50.*

Thomas does not disclose plasma or corona-treated surfaces essentially consisting of polyethylene and having an oxygen/carbon ratio which is higher than 0.19. In view of the foregoing, Thomas does not remedy the deficiencies of Langdon and Gyskiewicz such that the invention of claim 5, which is dependent on claim 1, would have been obvious to one of skill in the art from a combination of Langdon, Gyskiewicz and Thomas. In view thereof, Applicants respectfully request that this rejection be withdrawn.

From the foregoing, further and favorable action in the form of a Notice of Allowance is earnestly solicited. Should the Examiner feel that any issues remain, it is requested that the undersigned be contacted so that any such issues may be adequately addressed.

Respectfully submitted,

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Date: August 6, 2002